

Case 3504***Onthophagus rugulosus* Harold, 1886 (Coleoptera, SCARABAEIDAE):
proposed conservation of the specific name**

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Abstract. The purpose of this application, under Article 23.9.3 of the Code, is to conserve the specific name of the dung beetle *Onthophagus rugulosus* Harold, 1886 (Coleoptera: SCARABAEIDAE), a widespread species from East Asia, by suppressing the senior secondary homonym *Elytridium rugulosum* Heer, 1870, a fragmentary fossil from the Miocene of Spitsbergen, Norway, that was transferred to *Onthophagus* in 1977. A replacement name, *O. spitsbergeniensis* nom. nov., is proposed for the dubious fossil species.

Keywords. Nomenclature; Coleoptera; SCARABAEIDAE; *Onthophagus*; *Elytridium*; *Onthophagus rugulosus*; dung beetles; Miocene; East Asia; Spitsbergen.

1. Heer (1870, p. 78) described the fossil species *Elytridium rugulosum* from an elytron from the Miocene of Spitsbergen, Norway, which he tentatively classified as a ground beetle (Coleoptera: CARABIDAE).

2. Harold (in Heyden et al., 1886, p. 289) described the extant species *Onthophagus rugulosus* from the surroundings of Beijing, China (Coleoptera: SCARABAEIDAE). The species is distributed from China to Assam, Korea and Vietnam (Löbl et al., 2006). The name has two junior subjective synonyms, *O. expansicollis* Fairmaire, 1891 (synonymised by Boucomont, 1919) and *O. sonani* Miwa, 1930 (synonymised without explanation by Nomura, 1973, p. 49; not listed as a synonym by Kabakov, 2006, p. 308). I am not aware of any use of *O. expansicollis* as a valid name after its description. *O. sonani* has rarely been used as valid (Miwa, 1931, p. 282; Matsumura, 1938, p. 55; as a dubious species by Balthasar, 1963, p. 532; and in the secondary incorrect spelling '*Onthophagus sonorni* Miwa' by Kim, 1960, p. 27 and Anonymous, 1967, p. 198). *Onthophagus rugulosus* is a commonly used name in all standard monographs and frequently included in faunistic papers of the region (e.g. Bates, 1888, p. 371; Reitter, 1893, p. 51; Boucomont, 1914, p. 301; Boucomont & Gillet, 1921, pp. 35, 54; Arrow, 1931, p. 227; Balthasar, 1935, p. 335; 1963, p. 507; Matsumura, 1937, p. 2, 1938, p. 55; Paulian, 1945, p. 125; Cho, 1957, p. 289; Moxey, 1963, p. 26; Nomura, 1973, p. 49; Paik, 1976, p. 154; Kim, 1977, p. 332; 1985, pp. 3, 11; 2000, p. 73; Kabakov, 1979, p. 82; 2006, p. 308; Stebnicka, 1980, p. 226; Kim & Lee, 1991, p. 66; Kim et al., 1991, p. 179; Kabakov & Napolov, 1999, p. 86; Chen, 2002, p. 232; Zhang & Luo, 2002, p. 434; Krajcik, 2006, p. 130; Löbl et al., 2006, p. 166). *O. rugulosus* is the type species of the subgenus *Sinonthophagus* Kabakov, 2006.

3. Birket-Smith (1977, pp. 25–26) reinterpreted Heer's holotype and transferred *Elytridium rugulosum* to the genus *Onthophagus* Latreille, 1802: '*Onthophagus s. lat. rugulosus* (HEER, 1870) comb. nov. (nec. HAROLD in LEYDEN, 1886.)' [sic]. Although Birket-Smith recognised the homonymy with Harold's name, he neither commented nor acted on it. The name has subsequently been used in this combination as valid only by Krell (2007, p. 46), but having overlooked Birket-Smith's paper, I considered this combination doubtful at the time. Judging from the photographic documentation provided by Birket-Smith, the generic placement might well be correct although the species might equally be classified as belonging to another genus of the ONTHOPHAGINI, e.g. *Caccobius*. Since we cannot exclude the possibility that it belongs to *Onthophagus*, there is no justification for changing Birket-Smith's classification, and *Onthophagus rugulosus* (Heer, 1870) is a senior secondary homonym of *Onthophagus rugulosus* Harold, 1886.

4. The replacement of the widely used name *Onthophagus rugulosus* Harold, 1886 by either a dubious name (*O. sonani* Miwa, 1930) or an unused name (*O. expansicollis* Fairmaire, 1891) just because we cannot exclude the possibility that the fossil *Elytridium rugulosum* Heer, 1870 represents an *Onthophagus* would be likely to cause confusion. The suppression of Heer's name, that has rarely been cited in the literature, would have hardly any destabilising effect. I propose the name *Onthophagus spitsbergeniensis* **nom. nov.** for *Onthophagus rugulosus* (Heer, 1870). The species name is an adjective and derived from the type locality Spitsbergen. Since it is the only *Onthophagus* species recorded from Spitsbergen (Kangas, 1973) it should be obvious from the name that it refers to Heer's fossil species.

5. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to suppress the specific name *rugulosum* Heer, 1870, as published in the binomen *Elytridium rugulosum*, and all uses of the name before Harold (1886) for the Purposes of both the Principle of Priority and the Principle of Homonymy;
- (2) to place on the Official List of Specific Names in Zoology the following names:
 - (a) *rugulosus* Harold, 1886, as published in the binomen *Onthophagus rugulosus*;
 - (b) *spitsbergeniensis* Krell, 2010, as published in the binomen *Onthophagus spitsbergeniensis*, the replacement name for *Elytridium rugulosum* Heer, 1870;
- (3) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the name *rugulosum* Heer, 1870, as published in the binomen *Elytridium rugulosum* and as suppressed in (1) above.

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